

REMARKS

The present Amendment amends claims 1, 4, 8-10, 12, 15 and 21, leaves claims 2, 3, 5-7, 11, 13, 14 and 16-20 unchanged, and adds new claims 22-30. Therefore, the present application has pending claims 1-30.

Claims 1-21 stand rejected under 35 USC §103(a) as being unpatentable over Arakawa (U.S. Patent No. 5,408,610) in view of DeVries (U.S. Patent No. 5,721,914). This rejection is traversed for the following reasons. Applicants submit that the features of the present invention as now recited in claims 1-21 are not taught or suggested by Arakawa or DeVries whether taken individually or in combination with each other as suggested by the Examiner. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Amendments were made to teach of the independent claims so as to more clearly recite that the present invention is directed to a data transfer method and apparatus for use in a hierarchical computer system in which a plurality of systems are interconnected in a hierarchical manner. According to the present invention, first data including an item from an upper system in a higher hierarchical level is received in a current system in a middle hierarchical level of the hierarchical computer system below the higher hierarchical level. Thereafter, attribute information corresponding to the item held in the current system is updated and second data held in the current system is added to the first data. The attribute information indicates a hierarchical relationship of the hierarchically interconnected systems included in the hierarchical computer system by which the item is managed. Further, according to the present invention the second data is sent to the upper system and the first data and the

second data is sent to a lower system in a lower hierarchical level below the middle hierarchical level.

The above described features of the present invention now more clearly recited in the claims are not taught or suggested by Arakawa whether taken individually or in combination with any of the other references of record. As argued in the Remarks of the November 12, 2003 Amendment, said Remarks being incorporated herein by reference, Arakawa merely discloses a system for managing data including a plurality of management systems which are connected in a token (logic) ring network such as that illustrated in Fig. 2 of Arakawa. Arakawa specifically describes that data between the management systems flow in a single direction around the ring network such that in a first round of transmissions around the ring network, in each management system data of the other management systems stored in a database of the management system and data of the management system itself is added to the end of data to be sent to the next management system. Arakawa further teaches that in a second round of transmissions around the ring network said second round having the same direction as the first round, in each management system data of the management system is deleted from data to be sent to the next management system.

Thus, as is quite clear Arakawa does not teach or suggest a hierarchical computer system in which a plurality of systems are interconnected in a hierarchical manner such as that illustrated, for example, in Fig. 3 of the present application. As clearly recited in the claims, due to the hierarchical interconnection of the systems included in the hierarchical computer network, an item is first transferred from an

upper system in a higher hierarchical level to a current system in a middle hierarchical level below the higher hierarchical level and thereafter a result file is transferred from the current system to the upper system and to a lower system in a lower hierarchical level below the middle hierarchical level. Such features are clearly not taught or suggested by Arakawa since first of all, Arakawa teaches that the management systems are connected to each other in a ring network and second the transmissions occur only in one direction. There are no bi-directional transmission in Arakawa. Thus, for example, in Fig. 2 of Arakawa node A cannot transmit directly to node E, node E can only send data to node A.

Therefore, Arakawa fails to teach or suggest data transfer in a hierarchical computer system in which a plurality of systems are interconnected in a hierarchical manner as recited in the claims.

Further, Arakawa fails to teach or suggest receiving first data including an item from an upper system in a higher hierarchical level, updating attribute information corresponding to the item held in a current system in a middle hierarchical level below the higher hierarchical level and adding second data in the current system to the first data, and sending the second data to the upper system and sending the first data and the second data to a lower system in a lower hierarchical level below the middle hierarchical level as recited in the claims.

In addition to the above, there is absolutely no teach or suggestion in Arakawa of the attribute information which indicates a hierarchical relationship of the hierarchically interconnected systems included in the hierarchical computer system by which the item is managed as in the present invention. According to the present

invention, the attribute information provides information to the current system so that the current system can know the extent of the hierarchical computer system, particularly with regard to how the systems are the hierarchically interconnected in the hierarchical computer system. There is no need for such attribute information in Arakawa since the teaching therein is not concerned with hierarchically interconnected systems included in hierarchical computer system in which communications can be performed in two directions between the hierarchical levels as in the present invention. Arakawa simply teaches a system wherein the management systems are connected to each other on a token ring network and communications between the management systems flows in the normal ring network configuration in a single direction. Arakawa specifically teaches, for example, in col. 5, lines 24-27 that:

“nodes A to E of this embodiment each having the arrangement shown in Fig. 1 constitute a token ring LAN having a management server function”.

As is well known by those of ordinary skill in the art token ring LANs only transmit in a single direction, only nodes in possession of the token can perform a transmission, and such token is passed in a sequential manner from one node to the next in the ring network. The present invention as clearly recited in the claims is entirely different from that taught by Arakawa. Arakawa seems to teach away from the need for such attribute information since it is a token ring network.

Therefore, Arakawa fails to teach or suggest attribute information indicating a hierarchical relationship of the hierarchically interconnected systems included in the

hierarchical computer system by which the items is managed as recited in the claims.

The Examiner recognizes the above noted deficiencies of Arakawa and attempts to supply them with the teachings in DeVries. The Examiner alleges that DeVries discloses a hierarchical data distribution system where databases are updated according to their level in the hierarchy.

First, it would be simply impossible for those of ordinary skill in the art to integrate a token ring network with a system of hierarchically interconnected database systems as seem to be alleged by the Examiner. One of ordinary skill in the art in token ring networks would not look to hierarchical distribution systems as alleged by the Examiner. These two technologies are non-analogous and therefore could not be combined in the manner suggested by the Examiner.

Second, even beyond the above the Examiner has not addressed the basic question for which DeVries was allegedly used, specifically a teaching of attribute information as recited in the claims. At no point has the Examiner identified any specific teaching of attribute information in DeVries wherein the attribute information is updated in a manner corresponding to the item as held in the current system and the attribute information indicates to the current system a hierarchical relationship of the hierarchically interconnected systems included in the hierarchical computer system by which the item is managed as in the present invention. The teaching identified by the Examiner in col. 2, lines 27-51 of DeVries simply describes the hierarchical arrangement of the hierarchical data distribution system and that the databases are updated. Applicants' invention is not concerned with necessarily the

updating of a database but in fact is concerned with the updating of attribute information which represents the hierarchical relationships of the systems in the hierarchical computer system in a manner relative to an item held in a current system that was sent for inquiry from an upper level system. Such features are clearly not taught or suggested by DeVries.

Thus, DeVries suffers from the same deficiencies relative to the features of the present invention as now more clearly recited in the claims as Arakawa. Therefore, combining the teachings of Arakawa and DeVries in the manner suggested by the Examiner in the Office Action still fails to teach or suggest the features of the present invention as now more clearly recited in the claims. Accordingly, reconsideration and withdrawal of the 35 USC §103(a) rejection of claims 1-21 as being unpatentable over Arakawa and DeVries is respectfully requested.

As indicated above, the present Amendment adds new claims 22-30. New claims 22-30 recite many of the same features shown above not to be taught or suggested by the Arakawa. New claims 22-30 recite additional features such as, for example, previously defining default items in a current system and performing operations in the current system on an item file from an upper system relative to the default item. Such features regarding the previously defined default items and operations performed on the item from an upper level system in a current system based on the default items are clearly not taught or suggested by any of the references of record particularly Arakawa and DeVries.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references utilized in the rejection of claims 1-21.

In view of the foregoing amendments and remarks, Applicants submit that claims 1-30 are in condition for allowance. Accordingly, early allowance of claims 1-30 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (501.38112X00).

Respectfully submitted,

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